

14 CFR Part 39

[Docket No. 94-NM-93-AD; Amendment 39-9193; AD 95-08-04]

Airworthiness Directives; McDonnell Douglas Model DC-9-80 Series Airplanes and Model MD-88 Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Model DC-9-80 series airplanes and Model MD-88 airplanes, that requires an inspection to detect damage, burn marks, or discoloration at certain electrical plugs and receptacles of the sidewall lighting in the passenger cabin, and correction of discrepancies. This amendment would also require modification of the electrical connectors, which, when accomplished, would terminate the inspection requirement. This amendment is prompted by reports of failures of the electrical connectors in the sidewall fluorescent lighting, which resulted in smoke or lighting interruption in the passenger cabin. The actions specified by this AD are intended to prevent failures of the electrical connectors, which could result in poor socket/pin contact, excessive heat, electrical arcing, and subsequently, connector burn through and smoke in the passenger cabin.

DATES: Effective on May 18, 1995.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 18, 1995.

ADDRESSES: The service information referenced in this AD may be obtained from McDonnell Douglas Corporation, P.O. Box 1771, Long Beach, California 90801-1771, Attention: Business Unit Manager, Technical Administrative Support, Dept. L51, M.C. 2-98. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Elvin K. Wheeler, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount

Boulevard, Lakewood, California 90712; telephone (310) 627-5344; fax (310) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Model DC-9-80 series airplanes and Model MD-88 airplanes was published in the **Federal Register** on September 14, 1994 (59 FR 47103). That action proposed to require a visual inspection to detect damage, burn marks, or black or brown discoloration at certain electrical plugs and receptacles of the sidewall lighting in the passenger cabin, and correction of discrepancies. It also proposed to require the eventual modification of the electrical connectors of the sidewall lighting, which, when accomplished, would terminate the inspection requirement.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

One commenter supports the proposed rule.

One commenter requests that, prior to issuing a final rule, the FAA investigate the possibility of problems (i.e., overheated connectors, smoke in the cabin, etc.) resurfacing at another connector location. The commenter bases this request upon service history following accomplishment of the requirements of AD 91-10-08, amendment 39-6990 (55 FR 51427, December 14, 1990). AD 91-10-08 requires modification of the sidewall lighting system on these same airplanes to preclude overheated connectors, smoke in the cabin, etc., which is similar to the modification described in the proposal (reference McDonnell Douglas MD-80 Service Bulletin 33-99, dated May 24, 1994). This commenter points out that, since accomplishing the modification required by AD 91-10-08, the same problems (i.e., overheated connectors, smoke in the cabin, etc.) have resurfaced at the sidewall lighting connectors located "downstream" at the bag bins. Therefore, the commenter assumes these problems will resurface either at the new disconnects being installed in accordance with the proposal, or at the cabin lighting ballast connectors.

The FAA has re-evaluated the modification required by this AD, and reviewed other relevant data currently available. The FAA finds no basis to support the commenter's suggestion that this problem could resurface at another connection location in the airplane.

However, the FAA may consider further rulemaking action if service history indicates that the modification required by this AD produces questionable results.

Another commenter requests that the proposed modification be revised to retrofit a 115 volt electronic ballast system, instead of removing the existing 230 volt system and installing separate wire splice-connectors or hard splice at the 230 VAC (400 Hz) power wires. The commenter considers this suggested method to be superior to the proposed modification for addressing failures of the electrical connectors in the sidewall fluorescent lighting. The commenter states that failures in this system were fixed previously in a similar manner (reference AD 91-10-08), but at a different location. The commenter suggests that failures in this system could occur again, but in another location. The commenter states that the root cause of this problem is the high energy level required by the current magnetic ballasts for the sidewall lights.

The FAA does not concur that the rule should be revised to include this suggested action since sufficient data were not provided. As indicated previously, the FAA finds no basis at this time to support any suggestion that this problem could resurface at another connection location in the airplane, or that the proposed modification is inappropriate. However, the FAA also recognizes that alternative methods of compliance with the intent of this rule may also exist; a provision for the approval of such methods is contained in paragraph (c) of the final rule.

One commenter requests that the proposal be revised to require improvement of the existing connector, rather than the proposed action that would break out the 230 volt wire from the bundle and make a second connection to alleviate the problem in the existing connector. Again, the FAA does not concur with this suggestion since sufficient justification and service data was not presented. The FAA has determined that the existing current technology adequately addresses the identified unsafe condition by minimizing the possibility of failure of the electrical connectors. However, under provisions of paragraph (c) of the final rule, operators may apply for the approval of an alternative method of compliance, such as use of a different connector, if sufficient data are presented to the FAA that would justify such approval.

Two commenters request that the applicability of the proposal be limited. One of these commenters requests that the applicability be limited to "* * *

Model MD-88 airplanes equipped with magnetic ballasts." This commenter suggests that McDonnell Douglas MD-80 Service Bulletin 33-99, dated May 24, 1994, referenced in the proposal as the appropriate source of service information, is not the optimal solution to the sidewall connector problem. This commenter, in conjunction with McDonnell Douglas and Page Aerospace, has successfully completed testing of the Page electronic ballast, which has been approved as an equivalent level of safety to the modification described in Service Bulletin 33-99. The other commenter requests that the applicability of the proposal be limited to "* * * Model MD-88 airplanes equipped with inter-bin electrical connectors described (or similar to those described) in McDonnell Douglas MD-80 Service Bulletin 33-99, dated May 24, 1994." This commenter suggests that the effectivity listing of Service Bulletin 33-99 does not accurately reflect the fleet configuration.

The FAA does not concur with these commenters' request to limit the applicability of the proposal. The FAA does not consider it appropriate to include various provisions in an AD applicable to a single operator's unique configuration of an affected airplane. Paragraph (c) of this AD provides for the approval of an alternative method of compliance to address these types of unique configurations.

Two commenters question the FAA's cost and work hour estimate in the preamble of the proposal. One commenter has determined that it would take approximately 100 work hours per airplane to accomplish the proposed requirements. This commenter also states that McDonnell Douglas is not supplying required parts at no cost to the operators, as stated in the proposal, but is charging \$1,870 per kit. Another commenter suggests that 75 work hours per airplane would be more appropriate than the 50 work hours stated in the proposal. After considering the data presented by these commenters, the FAA finds it necessary to revise its previous estimates. The FAA concurs that 75 work hours is closer to the actual number of labor hours necessary for accomplishing the required actions. The FAA also has verified with the manufacturer that the required parts will cost operators \$1,870 per kit. In light of this, the economic impact information, below, has been revised to indicate the higher number of work hours and the price of required parts.

Additionally, the FAA has recently reviewed the figures it has used over the past several years in calculating the

economic impact of AD activity. In order to account for various inflationary costs in the airline industry, the FAA has determined that it is necessary to increase the labor rate used in these calculations from \$55 per work hour to \$60 per work hour. The economic impact information, below, has been revised to reflect this increase in the specified hourly labor rate.

As a result of recent communications with the Air Transport Association (ATA) of America, the FAA has learned that, in general, some operators may misunderstand the legal effect of AD's on airplanes that are identified in the applicability provision of the AD, but that have been altered or repaired in the area addressed by the AD. The FAA points out that all airplanes identified in the applicability provision of an AD are legally subject to the AD. If an airplane has been altered or repaired in the affected area in such a way as to affect compliance with the AD, the owner or operator is required to obtain FAA approval for an alternative method of compliance with the AD, in accordance with the paragraph of each AD that provides for such approvals. A note has been added to this final rule to clarify this long-standing requirement.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the change previously described. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

There are approximately 907 McDonnell Douglas Model DC-9-80 series airplanes and Model MD-88 airplanes of the affected design in the worldwide fleet. The FAA estimates that 490 airplanes of U.S. registry will be affected by this AD, that it will take approximately 75 work hours per airplane to accomplish the required actions, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$1,870 per airplane. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$3,121,300, or \$6,370 per airplane.

The total cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or

on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

95-08-04 McDonnell Douglas: Amendment 39-9193. Docket 94-NM-93-AD.

Applicability: Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes; and Model MD-88 airplanes; as listed in McDonnell Douglas MD-80 Service Bulletin 33-99, dated May 24, 1994; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (c) to request approval

from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition; or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any airplane from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

To prevent poor socket/pin contact, excessive heat, electrical arcing, and subsequently, connector burn through and smoke in the passenger cabin, accomplish the following:

(a) Within 18 months after the effective date of this AD, perform a visual inspection to detect damage, burn marks, or black or brown discoloration caused by electrical arcing at electrical plugs, having part number (P/N) MS3126F-15P, and receptacles, having P/N MS3124E-15S, of the sidewall lighting in the passenger cabin, in accordance with McDonnell Douglas MD-80 Service Bulletin 33-99, dated May 24, 1994.

(1) If no discrepancies are found, no further action is required by this paragraph.

(2) If any discrepancy is found, prior to further flight, replace the damaged connectors, pins, sockets, or wire with new parts, in accordance with the service bulletin.

(b) Within 18 months after the effective date of this AD, modify the electrical connectors of the sidewall lighting in the passenger cabin in accordance with McDonnell Douglas Service Bulletin 33-99, dated May 24, 1994. Accomplishment of this modification constitutes terminating action for the requirements of this AD.

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) The inspection, replacement, and modification shall be done in accordance with McDonnell Douglas MD-80 Service Bulletin 33-99, dated May 24, 1994. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from McDonnell Douglas Corporation, P.O. Box 1771, Long Beach, California 90801-1771, Attention: Business Unit Manager, Technical Administrative Support, Dept. L51, M.C. 2-98. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind

Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on May 18, 1995.

Issued in Renton, Washington, on April 5, 1995.

S. R. Miller,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 95-8829 Filed 4-17-95; 8:45 am]

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14 CFR Part 39

[Docket No. 94-NM-220-AD; Amendment 39-9195; AD 95-08-06]

Airworthiness Directives; Raytheon Corporate Jets Models DH/BH/HS/BAe 125-1A to -700A Series Airplanes; BAe 125-800A Airplanes; and Hawker 800 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Raytheon Corporate Jets Models DH/BH/HS/BAe 125-1A to -700A series, BAe 125-800A, and Hawker 800 series airplanes, that requires replacement of the existing standby static inverter with an inverter that incorporates a circuit board assembly sealed with a conformal coating. This amendment is prompted by reports of failure of the standby static inverter caused by electrical shorting from moisture condensing on the printed circuit boards (PCB), due to aberrations in the PCB conformal coating. The actions specified by this AD are intended to prevent malfunction of the standby static inverter due to exposure to moisture caused by inadequate insulation coating of the circuit board assembly. Malfunction or failure of the standby static inverter, when its use is necessary, could result in the loss of electric power for certain equipment critical to safety of flight.

DATES: Effective May 18, 1995.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 18, 1995.

ADDRESSES: The service information referenced in this AD may be obtained from Raytheon Corporate Jets, Inc., 3 Bishops Square, St. Albans Road West, Hatfield, Hertfordshire AL109NE,

United Kingdom. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: William Schroeder, Aerospace Engineer, Standardization Branch, ANM-113, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2148; fax (206) 227-1320.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Raytheon Corporate Jets Models DH/BH/HS/BAe 125-1A to -700A series airplanes, BAe 125-800A airplanes, and Hawker 800 airplanes was published in the **Federal Register** on January 18, 1995 (60 FR 3592). That action proposed to require replacement of the existing standby static inverters with a printed circuit board assembly that is properly sealed with a conformal coating.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

For clarification purposes, the FAA has revised the references to the DH/BH/HS/BAe 125 models throughout this rule to add the model designator "A" to the series numbers. Models DH/BH/HS/BAe 125-1A through -700A are the models that are type certificated for operation in the United States and, accordingly, affected by this AD action.

- After careful review of the available data, the FAA has determined that air safety and the public interest require the adoption of the rule with the clarifying change previously described. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

The FAA estimates that 450 airplanes of U.S. registry will be affected by this AD, that it will take approximately 4 work hours per airplane to accomplish the required actions, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$410 per airplane. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$292,500, or \$650 per airplane.

The total cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of